

U. S. Application No. 10/717,865
Attorney Docket No. 2003B005/2
Reply to Final Rejection of September 14, 2006
Response dated October 5, 2006

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Listing of Claims

Claims 1-28 (Cancelled).

29. (Previously amended) A copolymer composition comprising a diene-modified polypropylene random copolymer having propylene units; diene units, derived from 2-methyl-1,5-hexadiene or α , internal, non-conjugated diene monomers; from 0.0 wt% to [[20]] 2.0 wt% ethylene units; and a heat fusion of 25 J/g or more.
30. (Original) The copolymer composition of claim 29 in which the diene units derived from α , internal non-conjugated diene monomers are present in the polypropylene copolymer in an amount of from 0.0005 mol% to 10 mol%.
31. (Original) The copolymer composition of claim 29 in which the diene units derived from α , internal non-conjugated diene monomers are present in the polypropylene copolymer in an amount of from 0.005 mol% to 1 mol%.
32. (Previously amended) The copolymer composition of claim 29, in which the α , internal non-conjugated diene monomer is ~~selected from the group consisting of 2-methyl-1,5-hexadiene and 7-methyl-1,6-octadiene.~~
33. (Previously amended) The polymer composition of claim 29, in which the polypropylene copolymer has a crystallization temperature (T_c) of 25 °C or more.
34. (Previously amended) The polymer composition of claim 29, in which the polypropylene copolymer has a crystallization temperature (T_c) of 50 °C or more.
35. (Previously amended) The polymer composition of claim 29, in which the polypropylene copolymer has a crystallization temperature (T_c) of 75 °C or more.
36. (Previously amended) The polymer composition of claim 29, in which the polypropylene copolymer has a crystallization temperature (T_c) of 110 °C or more.

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37. (Previously amended) The polymer composition of claim 29, in which the polypropylene copolymer has a crystallization temperature (T_c) of from 25 °C to 115 °C.
38. (Previously amended) The polymer composition of claim 29, in which the polypropylene copolymer has a melting point (T_m) of 50 °C or more.
39. (Previously amended) The polymer composition of claim 29, in which the polypropylene copolymer has a melting point (T_m) of 75 °C or more.
40. (Previously amended) The polymer composition of claim 29, in which the polypropylene copolymer has a melting point (T_m) of 100 °C or more.
41. (Previously amended) The polymer composition of claim 29, in which the polypropylene copolymer has a melting point (T_m) of 125 °C or more.
42. (Previously amended) The polymer composition of claim 29, in which the polypropylene copolymer has a melting point (T_m) of 165 °C or more.
43. (Previously amended) The polymer composition of claim 29, in which the polypropylene copolymer has a melting point (T_m) of from 50 °C to 165 °C.
44. (Previously amended) The polymer composition of claim 29, in which the polypropylene copolymer has a melt flow rate of 0.01 dg/min or more.
45. (Previously amended) The polymer composition of claim 29, in which the polypropylene copolymer has a melt flow rate of 0.1 dg/min or more.
46. (Previously amended) The polymer composition of claim 29, in which the polypropylene copolymer has a melt flow rate of 0.5 dg/min or more.
47. (Previously amended) The polymer composition of claim 29, in which the polypropylene copolymer has a melt flow rate of 0.7 dg/min or more.

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48. (Previously amended) The polymer composition of claim 29, in which the polypropylene copolymer has a melt flow rate of 1.0 dg/min or more.
49. (Previously amended) The polymer composition of claim 29, in which the polypropylene copolymer has a melt flow rate of 1.5 dg/min or more.
50. (Previously presented) The copolymer composition of claim 29 in which the diene units derived from 2-methyl-1,5-hexadiene are present in the polypropylene copolymer in an amount of from 0.0005 mol% to 10 mol%.
51. (Previously presented) The copolymer composition of claim 29 in which the diene units derived from 2-methyl-1,5-hexadiene are present in the polypropylene copolymer in an amount of from 0.005 mol% to 1 mol%.
52. (New) A copolymer composition comprising a diene-modified polypropylene random copolymer having propylene units; diene units, derived from 2-methyl-1,5-hexadiene or α , internal, non-conjugated diene monomers; from 0.0 wt% to 2.0 wt% ethylene units; and exhibiting a heat fusion of 25 J/g or more and a branching index of less than 1.0.